

Amendments to the Specification:

Please replace the Abstract, the paragraph on page 14 beginning below the subheading “Abstract of Disclosure”, with the following rewritten paragraph:

A spread spectrum communications system ~~using~~ uses long, scalable PN sequences to achieve variable communication rates. ~~using a~~ A low-complexity and scalable matched filter architecture is used to provide a large processing gain; and robust recovery of multiple devices in long reach, high ambient-noise environments. The spread spectrum communications system includes a transmitter and a receiver. The receiver includes an RF receiver and a first matched filter receiving data from the RF receiver. A plurality of phase/frequency shifters receives a signal from the first matched filter. A plurality of second matched filters receive data from the plurality of phase/frequency shifters. An equalizer/decoder receives signals from the plurality of phase/frequency shifters.